

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the subject application.

Listing of Claims:

What is claimed is:

1. (Currently Amended) A locomotion interface that provides input signals, indicative of a user's movement, to a virtual reality system, the locomotion interface comprising:

_____ a pressure-sensing mat including a base layer, a plurality of pressure sensing elements formed over the base layer, a top layer formed over the plurality of pressure-sensing elements, and an input interface formed between the base layer and the top layer, wherein the plurality of pressure sensing elements output signals indicative of pressure applied to the top layer; ~~and~~

_____ a base structure coupled to the pressure-sensing mat, the base structure being fixed in a first position but freely moveable in a second position; _____

_____ a housing that retains the pressure-sensing mat and the base, said housing further comprising a roller disposed in the housing, the roller being in frictional contact with the pressure-sensing mat;

_____ a first motor that rotates the roller about a first axis; and

_____ a second motor that rotates the roller about a second axis, the second axis being perpendicular to the first axis, wherein the rotation of the roller generates thrust vectors that move the pressure-sensing mat in all direction.

2. (original) The locomotion interface of claim 1, wherein the base structure moves the pressure-sensing mat in all directions.

3. (original) The locomotion interface of claim 1, wherein the pressure-sensing mat allows the user to move in one or more of at least a forward moving position, a backward moving position, a left side moving position, a right side moving position and a position therebetween.

4. (original) The locomotion interface of claim 1, wherein the input interface comprises one or more radio-frequency communication interfaces.

5. (Cancelled)

6. (Currently Amended) The locomotion interface of claim 1, ~~5~~, further comprising a plurality of casters disposed between the housing and the pressure-sensing mat, the casters allowing the pressure-sensing mat to move in the housing.

7. (Cancelled)

8. (original) The locomotion interface of claim 1, wherein the plurality of pressure-sensing elements make up a grid.

9. (original) The locomotion interface of claim 1, wherein the plurality of pressure-sensing elements comprise force sensitive resistors.

10. (original) The locomotion interface of claim 1, wherein the base layer comprises a semi-rigid material.

11. (original) The locomotion interface of claim 1, wherein the base layer comprises plastic.

12. (original) The locomotion interface of claim 1, wherein the top layer comprises rubber.

13. (original) A virtual reality system comprising the locomotion interface of claim 1.

14-34. (Cancelled)